

BROWNE'S
Arithmetical Tables,

COMBINED WITH

EASY LESSONS

IN

MENTAL ARITHMETIC.

FOR BEGINNERS.

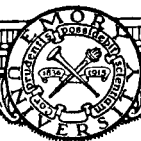
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TUSCALOOSA, ALA

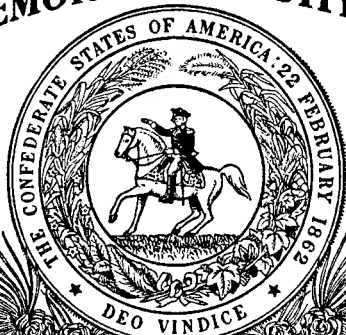
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**KEITH M. READ
CONFEDERATE
COLLECTION**

PREFACE.

No apology is deemed necessary for presenting this little work to the public. As far as it goes, it contains the results of more than twenty years' experience in practical instruction in this department of the duties of the Southern school room.

One important feature, too frequently overlooked by those who prepare books of instruction for very little children, has been steadily kept in view in its preparation. The book is adapted to the supposed progress in reading of its little students. Indeed, it is thought that it may be used profitably as a reading book for the class of pupils for whom it is designed.

Another feature is that the thinking faculty of the learner is, from the beginning, kept in constant, but not too laborious exercise. It is hoped that the lessons are sufficiently progressive for the brightest pupils, yet not too much so for those of average ability.

Whether the series, of which this may perhaps be the "Primer," will ever be completed, will depend partly upon the reception it may meet with, and partly upon the author's other pressing duties in the school room and in the pulpit.

G. Y. B.

EUFAULA, ALABAMA.

INTRODUCTION.

The grand object, never to be lost sight of, in every department of instruction, should be the development of the intellectual faculties. Mathematical studies have generally been thought to be highly conducive to this grand object; but, as ordinarily pursued, it may well be questioned whether they do not exert an injurious rather than a beneficial influence. The author hopes, by this "Primer," to aid both teacher and pupil to draw the highest possible intellectual benefit from these elementary studies.

MACHINERY.—In the prosecution of this labor but little machinery is necessary. A black board and some chalk are great conveniences. An Abacus may serve for a while to amuse, and may prove an assistance. The author had one for some time, but found it rather an incumbrance. A slate and pencil from the beginning will be found indispensable.

RECITATIONS.—Three features should characterize every recitation, viz: absolute perfectness, great promptness, and rigid attention. To state these points may be sufficient. The author has been accustomed to consider a slip of the tongue, or the

slightest hesitation in reciting the tables, a failure. It requires a great deal of drilling to stimulate pupils to this very high standard of excellence, but it may be accomplished by gradual approaches, not only without annoyance, but with positive pleasure to the pupil.

THE FIGURES.—To teach the forms and names of the figures, make the digits on the black-board in any order whatever, thus:

1	9	4	0
5	3	6	5
7	2	8	4

Name them over in concert with the class several times, and then call upon each pupil to point to any number that may be named. A few lessons of from ten to fifteen minutes each will be sufficient for the instruction of a large class. The pupils should be encouraged to write the figures with chalk upon the black-board. The value of the figures may be taught by making marks upon the black-board and writing in connection the proper figures, thus: $1=1$ $11=2$ $111=3$ $1111=4$ $11111=5$ $11111=9$, and so on. The pupils should, of course, write such exercises both upon the board and upon the slates.

The same point may be further illustrated by an

Abacus, or by buttons, marbles, pencils, books or anything else that may be convenient.

COUNTING.—This exercise should be performed forwards and backwards to any required number in concert at first, but afterwards by each pupil singly. By a simple device, which will be found explained at some length in the remarks before Multiplication, the pupil will be enabled to count by any intervals that may be required. It may be done in the first place by the odd numbers, 1, 3, 5, 7 and 9, and afterwards by the even numbers, 2, 4, 6 and 8. As this kind of counting facilitates the acquirement of all the four fundamental operations of arithmetic, it is suggested that it be put into practice as soon as the pupils have a tolerable idea of the value of the figures, and kept in daily exercise, forwards and backwards, until the whole school can count thus promptly and accurately.

THE SIGNS.—The author prefers to use Algebraic signs from the beginning. In the *Addition table* two signs are used +, plus; and =, equal. The name of the first is plus—its meaning is “more, add or and.” In the table, the last meaning is used. The = is the sign of equality, and may mean “are, leaves or is,” as the case may require. Thus, in the Addition table for $1+1=2$ read one, and one are two, and so on.

In the *Subtraction Table* one additional sign is

used, viz: —, minus. It means less or from. Hence read ($5 - 1 = 4$) thus: 1 from 5 leaves 4, &c.

In the Multiplication Table, another sign is employed. It is formed thus \times , and named the sign of multiplication. It may be interpreted "times." The third line of the table of six, which is written thus ($3 \times 6 = 18$.) may be read three times six is eighteen. (*See foot note Multiplication.*)

In Division, still another sign, made thus \div , is used. It is called the sign of division, and may be interpreted by "into." Thus in the table of nine the sixth line, which is written ($54 \div 9 = 6$.) may be read nine into fifty-four six times, and so on,

ADDITION

Lesson First.—Increasing by Ones.

1. One boy is on a box, one more boy gets on; how many boys are now on the box?
2. Two hens are in a coop, one more is put in; how many hens are now in the coop?
3. Three nuts are on a plate; if one nut more is put on, how many will that make?
4. John has four balls and James has one; how many balls have both boys?
5. Five girls are on a bench and one is on a chair; how many girls are there in all?
6. Six ducks are in the pond; if one more goes in how many will that make?
7. I have seven dimes in my right hand and one in my left; how many dimes are in both hands?
8. Add eight yards to one yard; how many yards will there be?
9. Nine sticks of wood are in a pile; if one more stick is put in the pile, how many will that make?
10. Ten hats are in a box; put one more hat in, and how many hats will there be?

THE TABLE.

1	+	1	=	2		6	+	1	=	7
2		1		3		7		1		8
3		1		4		8		1		9
4		1		5		9		1		10
5		1		6		10		1		11

EXERCISES.

5 and 1? 3 and 1? 7 and 1? 2 and 1? 3 and 1?
 8 and 1? 4 and 1? 2 and 1? 1 and 1? 5 and 1?
 2 and 1? 7 and 1? 3 and 1? 9 and 1? 10 and 1?

Lesson Second.—Increasing by Twos.

1. Mary has put two pins in her dress and wants one more; how many will that make?

2. One hen eats two grains of corn and then eats two more grains; how many grains did she eat?

3. John puts two chairs to the table and Jane puts three; how many are there at the table?

4. If four books are in a pile, and two more are put in, how many books will there be in the pile?

5. George drives five nails into a board, and two into another; how many nails did he drive?

6. There are six boxes on a dray, and two more are put on; how many does that make?

7. Seven bells are in a store, and two more are brought in; how many does that make?

8. Eight hats are on a stand; if two more are put on how many will there be?

9. James has nine old coats and two new ones; how many coats has he?


10. Ten black birds and two red ones make how many?

THE TABLE.

1	+	2	=	3		6	+	2	=	8
2		2		4		7		2		9
3		2		5		8		2		10
4		2		6		9		2		11
5		2		7		10		2		12

EXERCISES.

4 and 2? 5 and 2? 4 and 1? 3 and 2? 7 and 2?
 6 and 2? 7 and 1? 10 and 2? 1 and 2? 4 and 1?
 7 and 2? 9 and 2? 8 and 2? 6 and 1? 2 and 2?
 3 and 1? 2 and 2? 6 and 2? 5 and 2? 4 and 2?
 9 and 1? 8 and 2? 2 and 2? 5 and 1? 6 and 2?
 7 and 2? 5 and 2? 9 and 2? 4 and 2? 5 and 2?

 Many more such questions should be asked.

Lesson Third.—Increasing by Threes.

1. Three caps are in the drawer, and one more is put in; how many will that make?
2. Jane makes up three beds in one room and two in another; how many beds does she make up?
3. Three large figs and three small ones make how many figs?
4. If four jugs are full of milk and three full of wine, how many jugs will that make?
5. Five bags are filled with nuts and three with rice; how many bags does that make?
6. There are six kegs in a row and three in another; how many kegs in both rows?
7. Seven axes with helves and three without, make how many axes?
8. Mary has eight dresses and Jane has three; how many dresses have both?
9. Nine men are in the house and three in the street; how many men does that make?
10. There are ten maps in the book and three on the wall; how many maps are there in all?

THE TABLE.

1	+	3	=	4		6	+	3	=	9
2		3		5		7		3		10
3		3		6		8		3		11
4		3		7		9		3		12
5		3		8		10		3		13

EXERCISES.

- 7 and 3? 9 and 2? 5 and 3? 6 and 2? 8 and 3?
 3 and 3? 6 and 1? 7 and 2? 3 and 3? 5 and 2?
 5 and 2? 2 and 3? 9 and 3? 1 and 3? 2 and 3?
 4 and 1? 7 and 2? 8 and 3? 7 and 1? 6 and 3?
 4 and 2? 5 and 1? 3 and 1? 2 and 5? 9 and 3?
 7 and 3? 5 and 2? 2 and 1? 4 and 1? 7 and 2?

Lesson Fourth.—Increasing by Fours.

1. Four palm-leaf fans and one silk one will make how many fans?
2. John brings in four logs and James brings in two; how many logs do both bring in?
3. There are four glass mugs and three tin ones; how many mugs does both make?
4. Mary has four white and four red hair pins; how many hair pins has she?
5. Jane found five eggs in one nest and four in another; how many eggs did she find?
6. Sallie has four dolls and Mary has six; how many dolls have both?
7. George drew seven cats on one side of his slate and four on the other; how many cats did he draw?
8. Eight birds are on one tree and four on another; how many birds on both trees?
9. A boy ate nine cakes and a girl ate four; how many did both eat?
10. Ten black eyes in five girls and four blue eyes in two girls make how many eyes?

THE TABLE.

1	+	4	=	5		6	+	4	=	10
2		4		6		7		4		11
3		4		7		8		4		12
4		4		8		9		4		13
5		4		9		10		4		14

EXERCISES.

9 and 4? 7 and 4? 3 and 3? 6 and 2? 8 and 4?
 3 and 4? 4 and 4? 6 and 4? 4 and 3? 3 and 4?
 5 and 3? 2 and 2? 9 and 1? 1 and 4? 7 and 2?
 7 and 2? 5 and 3? 8 and 4? 7 and 4? 4 and 3?
 5 and 4? 2 and 4? 2 and 1? 7 and 3? 9 and 3?
 6 and 4? 7 and 4? 9 and 4? 2 and 4? 7 and 1?

Lesson Fifth.—Increasing by Fives.

1. A girl has five toys; if one more be given her how many toys will she have?
2. There are two balls of white yarn in a box and five of red; how many balls are there?
3. Five mules are in one team and three in another; how many mules in both teams?
4. Mary has five pet lambs and Kate has four; how many lambs have both?
5. Five square bales and five round bales make how many bales?
6. Six pinks are in bloom and six are not; how many pinks does that make?
7. Seven sheets are in the wash and six on the beds; how many sheets in all?
8. John jumps five times, Pete eight times; how many times do both jump?
9. Nine guns in one rack and five in another make how many guns?
10. James gave ten cents to a poor man and Charles gave five; how many cents did both give?

THE TABLE.

1	+	5	=	6		6	+	5	=	11
2		5		7		7		5		12
3		5		8		8		5		13
4		5		9		9		5		14
5		5		10		10		5		15

EXERCISES.

- 7 and 5? 9 and 1? 5 and 5? 6 and 5? 8 and 5?
 3 and 4? 6 and 5? 7 and 5? 3 and 5? 5 and 4?
 4 and 5? 2 and 5? 9 and 4? 1 and 5? 2 and 3?
 5 and 3? 4 and 3? 3 and 4? 4 and 5? 5 and 4?
 5 and 5? 7 and 5? 3 and 1? 9 and 5? 7 and 5?
 2 and 5? 5 and 5? 9 and 5? 10 and 5? 10 and 4?

Lesson Sixth.—Increasing by Sixes.

1. The babe had six teeth and one more has come; how many teeth has it now?
2. A boy had six fish hooks, he found two more; how many did that make?
3. If three pies are done and six are not done; how many pies will that be?
4. Four trees are in one row and six in another; how many trees in both rows?
5. One knife has five blades, another has six; how many blades have both knives?
6. There are six doors in the old house and six in the new; how many doors are there in both houses?
7. If seven mills are on one stream and six on another; how many will there be on both streams?
8. Eight men are at work on that side of the house and six on this; how many men are there on both sides?
9. If there are nine hens that have nests and six that have not; how many hens will that make?
10. There are ten spools of white thread and six of black; how many spools of both?

THE TABLE.

1	+	6	=	7		6	+	6	=	12
2		6		8		7		6		13
3		6		9		8		6		14
4		6		10		9		6		15
5		6		11		10		6		16

EXERCISES.

- 5 and 6? 3 and 6? 9 and 5? 6 and 4? 2 and 3?
 4 and 6? 7 and 6? 5 and 4? 9 and 6? 6 and 5?
 3 and 4? 1 and 6? 4 and 6? 6 and 3? 9 and 2?
 7 and 5? 3 and 6? 8 and 6? 6 and 6? 9 and 5?
 2 and 6? 5 and 4? 4 and 6? 7 and 3? 2 and 4?
 3 and 3? 7 and 5? 10 and 3? 10 and 5? 10 and 6?

Lesson Seventh.—Increasing by Sevens.

1. One loaf of bread is at the fire and seven are on plates; how many loaves does that make?

2. Two cars and seven cars will make a train of how many cars?

3. John has three balls; James gives him seven more; how many has he then?

4. Seven pine posts are on this side of the fence and four on that; how many pine posts are there?

5. Five plows and seven plows make how many?

6. Six boys have hoes and seven have guns; how many boys does that make?

7. Ann has seven pins in one hand and seven in the other; how many are there in both hands?

8. Eight houses are on one side of the road and seven on the other; make how many houses?

9. Nine boys are in one room and seven in another; how many boys are there in both rooms?

10. Ten cows and seven calves make how many cattle?

THE TABLE.

1 + 7 = 8	6 + 7 = 13
2 + 7 = 9	7 + 7 = 14
3 + 7 = 10	8 + 7 = 15
4 + 7 = 11	9 + 7 = 16
5 + 7 = 12	10 + 7 = 17

EXERCISES.

6 and 7? 5 and 7? 10 and 4? 4 and 5? 9 and 7?
 5 and 7? 3 and 7? 6 and 6? 5 and 4? 2 and 5?
 3 and 7? 1 and 3? 4 and 7? 6 and 5? 7 and 4?
 9 and 7? 4 and 3? 10 and 6? 8 and 1? 6 and 4?
 2 and 7? 5 and 1? 10 and 1? 4 and 2? 3 and 5?
 4 and 6? 1 and 1? 9 and 4? 2 and 9? 1 and 8?
 7 and 6? 8 and 3? 10 and 9? 9 and 2? 7 and 8?
 7 and 5? 1 and 9? 6 and 1? 9 and 9? 10 and 6?

Lesson Eighth.—Increasing by Eights.

1. Eight leaves have blots on them and one leaf is torn; how many leaves does that make?
2. Two trees are blown down and eight are dead; how many trees?
3. Three sheep are in the fold and eight more are going in; how many will there be in?
4. James has four books in his desk and John has eight in his; how many are there in both desks?
5. Five snakes are under one log and eight under another; how many snakes under both logs?
6. Three men have six spurs and four boys have eight; how many spurs do they all have?
7. There are seven blots on one page and eight on another; how many blots are there on both pages?
8. There are eight wheels to this car and eight wheels to that; how many wheels to both cars?
9. If one boy makes eight rings on a slate and another boy makes nine, how many will both make?
10. Ten wet days and eight dry days; make how many?

THE TABLE.

1	+	8	=	9		6	+	8	=	14
2		8		10		7		8		15
3		8		11		8		8		16
4		8		12		9		8		17
5		8		13		10		8		18

EXERCISES.

8 and 5? 4 and 8? 3 and 5? 7 and 4? 9 and 6?
 5 and 7? 6 and 8? 8 and 8? 6 and 8? 7 and 4?
 8 and 7? 5 and 6? 2 and 8? 9 and 4? 1 and 8?
 8 and 5? 10 and 8? 9 and 8? 3 and 7? 7 and 8?
 1 and 6? 10 and 7? 7 and 5? 5 and 8? 3 and 8?
 5 and 7? 9 and 4? 3 and 2? 7 and 6? 1 and 6?
 9 and 2? 10 and 5? 7 and 7? 8 and 4? 3 and 6?

Lesson Ninth--Increasing by Nines.

1. Mary knows nine tunes; if she learns another how many will she know?

2. Two boys are at the well and nine are playing town-ball; how many boys are there?

3. Three desks are of oak wood and nine of pine; how many desks in all?

4. Four goobers (ground nuts) are on the stove; if nine more are put on how many will that make?

5. Five frogs are in the well, but nine have been taken out; how many were there in the well?

6. How many corks do six large ones and nine small ones make?

7. There are seven rods for the girls and nine for the boys; how many rods were there in all?

8. If to eight pounds of rice you add nine pounds, how many pounds will there be?

9. How many capes has Mary if she has nine of cloth and nine of lace?

10. Ten rows of corn are on one ear and nine on another; how many rows are on both ears?

THE TABLE.

1	+	9	=	10		6	+	9	=	15
2		9		11		7		9		16
3		9		12		8		9		17
4		9		13		9		9		18
5		9		14		10		9		19

EXERCISES.

4 and 9? 10 and 8? 3 and 9? 6 and 9? 9 and 5?
 7 and 9? 6 and 3? 4 and 7? 7 and 9? 5 and 6?
 9 and 9? 6 and 4? 4 and 8? 10 and 9? 8 and 9?
 2 and 1? 6 and 9? 8 and 9? 9 and 6? 7 and 5?
 1 and 9? 9 and 4? 2 and 9? 5 and 1? 7 and 8?
 5 and 9? 6 and 5? 9 and 4? 7 and 2? 4 and 9?

Lesson Tenth.—Increasing, by Tens.

1. One man owns one goat and another owns ten; how many do both own?
2. John brings two yams to school and Mary brings ten; how many do both bring?
3. Three white beads and ten green beads make how many?
4. Four Marys and ten Anns make how many girls?
5. How many keys are there if five are in one bunch and ten in another?
6. There are six shell combs and ten horn combs; how many combs in all?
7. If one girl is seven years old and another is ten, what is the sum of their ages?
8. Eight gnats are on my face and ten are on the wing; how many gnats are there?
9. If there are nine red calves and ten black ones, how many calves are there in all?
10. Ten birds are in one pie and ten in another; how many birds are there in both pies?

THE TABLE.

1 + 10 = 11	6 + 10 = 16
2 + 10 = 12	7 + 10 = 17
3 + 10 = 13	8 + 10 = 18
4 + 10 = 14	9 + 10 = 19
5 + 10 = 15	10 + 10 = 20

EXERCISES.

- 1 and 10? 7 and 9? 5 and 4? 3 and 10? 5 and 6?
 2 and 10? 7 and 4? 10 and 9? 8 and 10? 7 and 6?
 3 and 10? 9 and 7? 10 and 8? 4 and 10? 9 and 6?
 6 and 10? 5 and 4? 10 and 4? 6 and 10? 8 and 5?
 9 and 10? 3 and 7? 7 and 4? 2 and 10? 8 and 5?
 5 and 10? 5 and 8? 4 and 9? 9 and 7? 2 and 9?
 9 and 6? 4 and 7? 5 and 9? 8 and 7? 8 and 5?

Lesson Eleventh.—Miscellaneous Questions.

1. Mary has one apple and George gives her three more; how many has she then?
2. In a box there are six marbles; John puts in four more; how many are there in the box?
3. Seven cherries are on one stick and nine on another; how many cherries are there on both sticks?
4. Eight birds are sitting on one limb of a tree, and nine more are on another limb; how many on both limbs?
5. Nine houses are on this side the street and seven on that; how many houses are there on both sides?
6. The speckled hen has eleven chickens and the black hen seven; how many have both?
7. John has learned twelve verses and little Kittie has learned five; how many have they both learned?
8. On one dish there are fourteen eggs and on another six; how many on both dishes?
9. Sallie has four kittens and Mary has three dolls; how many have both? (If answered, ask "seven what?" and state that things which are not alike cannot be added.)
10. Five boys and three boys and four boys; are how many?
11. Three kites, two kites, and five kites; are how many?
12. Six pens, three pens, and two pens; are how many?
13. One horse, six horses, and five horses; are how many horses?
14. Three toes, five toes, and seven fingers; are how many? Why?
15. Seven books, five books, and four books; are how many?
16. Nine gloves, four gloves, and seven gloves; are how many?
17. Eight chairs, six chairs, and nine chairs; are how many?
18. Four birds, nine birds, and five birds; are how many?
19. Six stars, eight stars; and nine stars; are how many?
20. Nine beds, three beds, two beds, and one bed; are how many?

EXERCISES.

4+6+2?	9+2+3?	3+6+2?	3+4+6+2?
5 2 3?	2 7 2?	6 4 3?	5 3 2 4?
7 2 4?	3 6 4?	7 6 2?	8 4 2 1?
3 7 5?	5 4 2?	6 5 3?	6 3 5 2?
1 8 2?	6 3 5?	4 3 6?	5 4 3 2?
5 4 3?	8 5 4?	5 4 8?	3 7 2 5?
3 2 6?	2 3 6?	6 3 2?	7 6 3 4?
6 3 4?	9 1 3?	4 5 3?	8 4 5 3?
5 2 3?	8 4 2?	5 6 2?	5 3 8 4?
4 2 5?	7 5 6?	7 2 4?	9 5 4 2?
3 4 6?	6 4 3?	6 3 5?	8 3 6 4?
7 3 2?	5 3 2?	3 2 5?	5 4 7 6?

NOTE.—The Teacher should ask other questions of the same kind as are written on these two last pages. Require the answer to be given immediately upon the completion of the question. The object of this is to train the faculty of attention, and to compel the pupil to use his head rather than his fingers in the calculation. Let me illustrate this: Suppose the teacher says, (and he should always speak somewhat slowly) "nine, five" the pupil should be accustomed to *think* fourteen; then should the teacher say, "and three," the pupil is ready to answer seventeen.—The author has sometimes had quite small children so well trained that they would tell accurately and promptly upon the completion of the question, the same of as many as a dozen figures thus given out.

SUBTRACTION.

Lesson Twelfth.—Decreasing by Ones.

1. A boy had one pencil, but he soon lost it; what did he have left?
2. Mary had two yards of silk; she cut off one yard for a dress for her doll; how much remained?
3. Three little boys stood up to recite, but one was sent to his seat for talking; how many remained?
4. Four marbles were in a ring, but John knocked out one; how many remained?
5. Sarah, having five apples, ate one; how many remained?
6. A planter had six cows, one of which he sold; how many were left?
7. Take one feather from a bunch of seven feathers; how many will remain?
8. Eight birds were on a branch, but one flew away; how many were left?
9. A hen had nine little chickens, but the cat ate one of them; how many were left?
10. Ten books were in a pile, but George takes one off; how many are left?

THE TABLE.

1	—	1	=	0		6	—	1	=	5
2		1		1		7		1		6
3		1		2		8		1		7
4		1		3		9		1		8
5		1		4		10		1		9

EXERCISES.

5 less	1?	7 less	1?	6 less	1?	4 less	1?
9 less	1?	6 less	2?	5 and	3?	7 less	1?
5 less	3?	8 less	1?	8 and	6?	9 less	8?
10 less	1?	6 less	1?	10 less	6?	3 less	1?

Lesson Thirteenth. Decreasing by Twos.

1. Two vials were standing on a shelf, but both were knocked down; what remained?
2. Three tapers were lighted, but the wind blew two of them out; how many continued to burn?
3. Four giants went out to war; two of them were killed; how many returned?
4. Five basins were packed in a box; two were broken; how many were whole?
5. Six spiders were in a corner; Jane swept two of them down; how many were left?
6. Seven papers are lying together, but two of them are torn; how many are whole?
7. Eight pies were on the safe; two of them were eaten at dinner; how many are left?
8. Mary has nine cherries, two of which are wormy; how many are sound?
9. Ten cows are in the field, but two of them are without horns; how many have horns?
10. Eleven trees were standing in a row, but two have been cut down; how many remain?

THE TABLE.

2	—	2	=	0	7	—	2	=	5
3		2		1	8		2		6
4		2		2	9		2		7
5		2		3	10		2		8
6		2		4	11		2		9

EXERCISES.

9 less 2?	9 less	1?	4 less	3?	5 less	2?
6 less 2?	4 less	1?	7 less	2?	5 and	4?
10 less 2?	3 less	2?	5 less	2?	8 and	6?
1 and 7?	4 less	2?	9 and	4?	6 less	2?
7 less 2?	3 less	1?	7 and	3?	8 less	2?
5 less 2?	10 less	2?	6 less	2?	9 less	2?

Lesson Fourteenth.—Decreasing by Threes.

1. Three balloons were sent up; if they all come down will any remain up?
2. There are four bottles of ink; should three of them be emptied, how many will still be full?
3. Five rabbits were in a cage; three got out; how many remained?
4. A little girl who had six cents spent three; how many were left?
5. Seven buggies are going by; if three of them stop how many will continue on?
6. Katie had eight peaches, but she gave three of them to her brother; how many did she keep?
7. Eddie, having nine chestnuts, gave three to George; how many did he have left?
8. When we eat three of the ten melons which father bought, how many will remain?
9. A merchant had eleven pitchers; after three were sold, how many remained?
10. Twelve spools of cotton are in a paper; how many will be left after three are used?

THE TABLE.

3	—	3	=	0	8	—	3	=	5
4		3		1	9		3		6
5		3		2	10		3		7
6		3		3	11		3		8
7		3		4	12		3		9

EXERCISES.

7 less	2?	13 less	3?	6 less	2?	5 and	4?
9 less	3?	5 less	2?	12 less	3?	4 less	1?
8 and	5?	6 less	2?	7 less	2?	11 less	3?
9 less	6?	8 less	3?	10 and	4?	7 and	3?
7 less	3?	4 less	3?	5 less	3?	8 and	6?
9 less	3?	5 less	2?	6 less	3?	9 less	2?

Lesson Fifteenth.—Decreasing by Fours.

1. Henry had four pet-birds; having given them away he wanted to know how many were left?
2. A new house is to have five chimneys, but four of which are finished; how many are unfinished?
3. A tanner sells four hides out of six; how many remain?
4. Sarah goes to school four days in the week; how many does she stay at home?
5. Eight girls are sitting in the parlor; if four walk out, how many remain?
6. A drover has nine mules, of which he sells a team of four; how many does he keep?
7. Ten hogsheds of sugar are at the depot; a dray hauls off four; how many are left?
8. Eleven geese are swimming in the pond; if four come out, how many will remain?
9. Twelve shoes are in a box; if four are sold, how many will there be in the box?
10. If four grapes are taken from a bunch of thirteen, how many will remain?

THE TABLE.

4	—	4	=	0	9	—	4	=	5
5		4		1	10		4		6
6		4		2	11		4		7
7		4		3	12		4		8
8		4		4	13		4		9

EXERCISES.

9 less	5?	4 and	3?	6 less	3?	5 less	2?
7 less	5?	3 and	3?	5 less	4?	9 less	2?
6 less	3?	3 less	1?	10 less	4?	8 and	6?
9 less	4?	7 less	4?	11 less	3?	6 less	4?
7 and	6?	8 less	4?	13 less	4?	5 and	7?
4 and	9?	5 less	3?	10 less	8?	12 less	4?

Lesson Sixteenth.—Decreasing by Fives.

1. Five pitchforks were in the tool house, but Jim threw them all out; how many remained?

2. There are six padlocks, five of which have keys; how many are without keys?

3. A ladder has seven rounds, five of which are painted; how many are not painted?

4. Eight girls are out walking; five have pink scarfs; how many have not?

5. A large mouth ate five out of nine dumplings; how many were left?

6. Mary had ten strings of chinquepins; she gave five to Sarah; how many were left?

7. Eleven boys are playing town-ball; if five are on one side how many are on the other?

8. Twelve bags of flour; after five were sold, how many remained?

9. Thirteen hands are sent to work on the road; five of them lie down in the shade; how many work?

10. Five men out of fourteen are six feet high; how many are less?

THE TABLE.

5	—	5	=	0	10	—	5	=	5
6		5		1	11		5		6
7		5		2	12		5		7
8		5		3	13		5		8
9		5		4	14		5		9

EXERCISES.

14 less 5?	10 less 5?	15 less 5?	6 less 3?
6 and 4?	13 less 5?	7 and 3?	9 less 4?
11 less 5?	9 and 8?	12 less 5?	7 less 5?
9 less 5?	7 less 6?	6 less 5?	4 less 3?
6 and 5?	8 less 5?	10 less 5?	7 less 5?
4 and 9?	10 less 4?	5 and 6?	2 and 8?

Lesson Seventeenth.—Decreasing by Sixes.

1. Six rats made their nests under a stack of fodder; the cat caught them all; how many were left?

2. If we work six days out of seven, on how many do we rest?

3. Eight pigs are in the pen; if six are spotted, how many are not spotted?

4. Of nine bee-hives six are filled with honey; how many are not filled?

5. Lizzie has painted ten pictures; six have frames; how many have not?

6. Birdy is playing with eleven keys; if he keeps six, how many will he lose?

7. Twelve soldiers are marching; if there are six in the front rank, how many will there be in the rear rank?

8. If six flowers are pulled from a bouquet of thirteen, how many remain?

9. Fourteen cows are in the pea field; six are lying down; how many are standing?

10. Fifteen servants are dancing to the banjo; six are men; how many are women?

THE TABLE.

6	—	6	=	0	11	—	6	=	5
7		6		1	12		6		6
8		6		2	13		6		7
9		6		3	14		6		8
10		6		4	15		6		9

EXERCISES.

9 less 6?	11 less 6?	7 and 6?	13 less 5?
14 less 6?	10 less 6?	5 and 6?	12 less 6?
7 less 4?	10 less 5?	8 less 3?	6 less 6?
7 less 6?	6 and 9?	14 less 6?	6 and 6?
1 and 8?	9 less 6?	12 less 5?	15 less 6?
6 and 5?	13 less 6?	7 and 5?	9 less 4?

Lesson Eighteenth.—Decreasing by Sevens.

1. Seven cakes were on a plate; John ate them up; how many remained?

2. Eight pine trees grow together; seven are boxed for turpentine; how many are not?

3. Nine servants are picking cotton; if seven are women, how many are men?

4. Ten stacks of fodder are in the field; seven are fenced around; how many are not?

5. Out of eleven large yams seven have been cut with the hoe; how many are uncut?

6. Seven out of twelve cabins are double; how many are single?

7. In a family of thirteen children seven are boys; how many are girls?

8. Fourteen loads of wood have been hauled, of which seven were light-wood knots; how many were not?

9. Fifteen martin gourd are upon a pole; seven are empty; how many are occupied?

10. Of sixteen bales of cotton, if seven are hauled at one load, how many would be left for another?

THE TABLE

7	—	7	=	0	12	—	7	=	5
8		7		1	13		7		6
9		7		2	14		7		7
10		7		3	15		7		8
11		7		4	16		7		9

EXERCISES.

16 less 7?	15 less 6?	10 less 3?	14 and 9?
9 less 7?	17 less 7?	13 less 6?	16 and 8?
5 and 6?	8 less 7?	9 less 5?	12 less 7?
9 and 4?	7 and 7?	16 less 7?	14 less 4?
8 and 4?	10 less 7?	12 less 7?	17 and 9?
6 and 7?	15 less 7?	11 less 7?	19 less 7?

Lesson Nineteenth.—Decreasing by Eights.

1. A boy who had eight jackets but had worn them all out; how many were left?
2. Nine bacon sides were hanging in the smoke house; eight have been given out; how many are left?
3. James bought ten plugs of tobacco; after chewing eight how many were left?
4. Bought eleven dozen eggs; eight dozen only were fresh; how many were spoiled?
5. Take eight bales of cotton from twelve bales, and how many will be left?
6. Thirteen girls were in two classes; if eight are in one how many are there in the other?
7. Fourteen spinning wheels are at the shop; when eight are sold how many will be left?
8. Sarah has fifteen books; eight of them contain pictures; how many do not?
9. Sixteen hogs are in the pen; if eight are killed how many will be left?
10. Seventeen dead trees were in the field, but the wind blew down eight; how many are standing?

THE TABLE.

8	—	8	=	0	13	—	8	=	5
9		8		1	14		8		6
10		8		2	15		8		7
11		8		3	16		8		8
12		8		4	17		8		9

EXERCISES.

- | | | | |
|------------|------------|------------|------------|
| 16 less 8? | 9 less 4? | 13 less 8? | 15 less 7? |
| 15 less 8? | 7 and 9? | 14 less 7? | 12 less 8? |
| 10 less 8? | 13 less 7? | 6 and 9? | 11 less 8? |
| 6 and 8? | 9 less 5? | 13 less 7? | 17 less 8? |
| 15 less 8? | 10 less 8? | 12 less 7? | 9 less 8? |
| 12 less 8? | 7 and 9? | 10 less 8? | 14 less 8? |

Lesson Twentieth.—Decreasing by Nine.

1. Nine piles of brush are burning ; when they are all out, how many will remain ?
2. Nine out of ten jars of lard have been used ; how many remained ?
3. If a fence is eleven rails high and nine of them are old, how many are new ?
4. Twelve chairs are in a room ; if nine are split bottomed, how many are not ?
5. At my quarters there are thirteen chimneys, nine of which are built with sticks ; how many are not ?
6. Fourteen shuck pens stand in a row ; nine are full ; how many have been emptied ?
7. Out of fifteen days John rode to school nine times ; how often did he walk ?
8. Sixteen plows are at the shop ; nine are scooters ; how many are not ?
9. Seventeen plates were in a tray ; Sallie upset the tray and nine were broken ; how many were not ?
10. Eighteen sacks of salt were on the wagon ; nine have been carried into the smoke house ; how many are left ?

TABLE.

THE TABLE.					
9	—	9	=	0	
10	—	9	=	1	
11	—	9	=	2	
12	—	9	=	3	
13	—	9	=	4	
14	—	9	=	5	
15	—	9	=	6	
16	—	9	=	7	
17	—	9	=	8	
18	—	9	=	9	

EXERCISES.

- 15 less 9 ? 16 less 8 ? 8 less 2 ? 9 less 9 ?
 5 and 4 ? 12 less 9 ? 9 and 5 ? 11 less 9 ?
 17 less 8 ? 16 less 9 ? 19 less 9 ? 15 less 6 ?
 12 less 8 ? 18 less 9 ? 4 and 6 ? 10 less 9 ?
 18 less 9 ? 9 and 3 ? 17 less 8 ? 7 and 6 ?

Lesson Twenty-first.—Decreasing by Tens.

1. Ten boys were playing ball; when they all stopped how many were still playing?
2. Eleven pigeons have alighted on their house; if ten fly off, how many will be left?
3. Twelve wagons are on the road; if ten of them have loads how many have not?
4. Thirteen shawls are hanging in a row; if ten of them are removed, how many will remain?
5. Take ten pods of pepper from a string of fourteen pods, how many will remain?
6. A girl who has fifteen dimes spends ten; how many are left?
7. John is sixteen years old; Henry is ten years; required the difference of their ages?
8. If ten pupils stay at home from a class of seventeen, how many will be present?
9. Eighteen fruit trees are in the garden; ten of them are in bloom; how many are not?
10. The distance between two places is nineteen miles; if we have traveled ten, how many more must we travel?

THE TABLE.

10	—	10	=	0	15	—	10	=	5
11	=	10	—	1	16	=	10	—	6
12	=	10	—	2	17	=	10	—	7
13	=	10	—	3	18	=	10	—	8
14	=	10	—	4	19	=	10	—	9
0		0		0	0		0		0

EXERCISES.

- 18 less 10? 15 less 9? 12 less 6? 17 less 10?
 19 and 7? 16 less 8? 16 less 10? 18 less 8?
 14 less 7? 17 less 9? 13 less 10? 10 less 7?
 12 less 10? 19 less 6? 14 less 10? 10 less 4?
 8 and 6? 13 less 10? 17 less 8? 19 less 10?
 10 less 6? 17 less 9? 13 less 6? 15 less 8?

Lesson Twenty-second.—Miscellaneous Questions.

1. Henry had eight peaches, but he gave three to his sister; how many did he have left?

2. Mary had ten dimes in her purse, but she lost four of them; how many had she left?

3. The dog had nine puppies, but six of them were drowned; how many had she left?

4. The hen had fourteen chickens, but she raised only six of them; how many did she lose?

5. Katie had thirteen chestnuts, of which eight were roasted; how many were not roasted?

6. Eighteen girls went up to recite, but seven were sent to their seats for not knowing their lessons; how many remained?

7. Sarah has twelve apples; she gives two to George and two to Birdy; how many has she for herself?

8. Carrie had nine pencils; she lost three and gave one each to her two little brothers; how many are left?

9. Twelve eggs are boiling; four are taken out by James and three by John; how many are left?

10. Mary has three pies, but gives away two peaches; what has she left? Why?

11. John found six marbles and his mother gave him three more; but he owed fifteen marbles; how many did he still need?

12. There are fourteen sheets of paper on the table; two of them are yellow, five are brown, and the rest are white; how many are white?

EXERCISES.

$6+4+3-2?$	$12-8-2-4?$	$4+2+1+5+3?$
$5+6+4-2?$	$14-5-3+5?$	$5+3+2+3+4?$
$4+7+3-4?$	$15+3-9-2?$	$3+2+4+1+3?$
$5+2+4+3?$	$13+6-4+3?$	$2+4+3+2+1?$
$3+7-2+4?$	$12-5+4-2?$	$8+1+3+4+2?$
$8+5-4+3?$	$11+6-2-3?$	$3+5+2+5+4?$
$5+5-3+4?$	$14-3+9-2?$	$5+2+3+4+5?$
$6+9-2-4?$	$16-2-3+4?$	$3+4+2+5+5?$
$9+3-5+2?$	$5+4+6+3?$	$2+2+4+4+3?$
$8+6-3-4?$	$7+9+3+6?$	$5+4+3+6+2?$
$9+4-2-5?$	$4+9-2+5?$	$4+5+3+5+2?$
$8-3+4+6?$	$13-4+6-7?$	$6+3+2+4+1?$
$7-4+5+8?$	$12+6-4-2?$	$8+2+1+3+2?$
$9-6+4-3?$	$15+4-3-4?$	$9+3+4+5+3?$
$8-3+4+5?$	$8+9+4-5?$	$3+4+2+4+3?$
$7+5-3-4?$	$9+8+7-3?$	$6+3+2+4+5?$
$8+6-5+6?$	$4-9+2+4?$	$4+5+3+6+2?$

NOTE.—Let not the Teacher be alarmed at this array of figures, or lay it aside without faithful trial. The author, in this little Primer, merely indicates the outline of his course. A great many additional examples should be made by the Teacher at every step in the progress of his class.

